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10/716,397	11/20/2003	Katsuaki Akama	1086.1187	5532
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STAAS & HALSEY LLP			GYORFI, THOMAS A	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/716,397

Applicant(s)

AKAMA, KATSUAKI

Examiner

Thomas Gyorfi

Art Unit

2435

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/22)
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

1. Claims 1-14 remain for examination. The correspondence filed 9/9/09 amended claims 1, 2, 7, 8, 11, and 12.

Response to Arguments

2. Applicant's arguments with respect to claims 1-14 have been considered but are generally non-persuasive. Applicant's key argument, as understood by the Examiner, is presented on page 8 of the amendment of 9/9/09, 2nd paragraph:

A prima facie case of obviousness based upon Sanchez-Herrero and Teitelbaum cannot be established, because there is no evidence that one of ordinary skill in the art would combine Sanchez-Herrero's "registration request REGISTER" transmitted by the wireless terminal equipment, which must include the private-ID and the public-ID (col. 10, lines 14-18), with Teitelbaum's use of a user's input biometric information to use a phone and be billed based upon the input biometric information, while being silent on changing or transferring user registration of a phone, and then further modify both Sanchez-Herrero and Teitelbaum [sic] to provide the claimed method for position-registering the cellular phone to make it receivable or a method for position-registering a cellular phone...

Examiner disagrees. As was pointed out in the previous Office Action, Sanchez-Herrero discloses the multiple handset registration process of the claimed invention in full, save for the detail that the registration messages must also include biometric information. Applicant's arguments suggest that Applicant may not be aware of the well-known concept within the cryptographic arts of "two-factor" or "multi-factor" authentication. In layman's terms, all authentication/registration techniques involve at least one or more factors from any of the following categories:

- i. "Something you know" (e.g. a username, password, PIN number, ID number, etc)
- ii. "Something you have" (e.g. a smart card, security token, dongle, etc.)

- iii. "Something you are" (i.e. biometrics: fingerprint, voice print, iris/retina scan, etc.)¹

Those of ordinary skill in the art would have been well aware that any authentication scheme that links factors from two or more of the above enumerated categories will as a general rule be more secure than equivalent schemes employing only one factor.² By doing so, an attacker would have to employ multiple techniques to illicitly obtain all the factors required to masquerade as the intended victim; the challenge of having to obtain each of a password, a security token, a fingerprint, etc. would likely deter all but the most determined of attackers. Examiner has included multiple references herein attesting to the obviousness of two factor authentication.

3. In view of Applicant's amendment of the claims, and in order to expedite prosecution of the instant application, new grounds of rejection are presented herein. However, this is not to be construed as an admission that the Sanchez-Herrero and Teitelbaum references could not be combined to suggest the claimed invention; but rather is simply a reflection of the fact that the new references cited herein better illustrate that adding a biometric component to the multi-handset registration and authentication process of the Sanchez-Herrero invention would have been an obvious improvement to one of ordinary skill in the art by the time of the instant invention. Examiner reserves the right to reinstate rejections of the claims in view of the

¹ There is some debate as to whether "something you are" should be considered as a specific subset of "something you have"; however, regardless of one's position on that matter the fact remains that the claimed invention relies on two factors from two different categories to authenticate and register the user, so that debate is not germane to this case and will be ignored.

² Note that for a proper implementation of this technique, each factor must come from a different category of factors; e.g. employing a plurality of passwords (each being "something you know") is generally no more secure than employing a single password.

Teitelbaum reference, in part or in full, as may be warranted by future amendments to the instant application.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
5. Those invocations of Official Notice from the previous Office Action not directly challenged by the Applicant in the amendment of 9/9/09 are now taken as admissions of prior art, as provided by MPEP 2144.03(c).
6. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sanchez Herrero et al. (U.S. Patent 7,177,642) in view of Chander et al. (U.S. Patent 6,778,828).

Regarding claims 1, 7, and 11:

Sanchez Herrero discloses a method, program, and apparatus for registering the position of wireless terminal equipment (wireless disclosed at col. 5, lines 20-50 and col. 7, lines 60-67), comprising: registering in a database personal information, the personal information linking a subscribed terminal number, a terminal identification number and user charging information to biological information of a user possessing the wireless terminal equipment (the HSS: col. 8, lines 45-50); transferring subscribed telephone number and said first terminal identification information from among the personal information to an exchange which allows communication with the first wireless terminal

equipment to request registration of position information permitting call in and call out of said first wireless terminal equipment by said subscribed telephone number (all of columns 10 and 11, but particularly col. 10, lines 10-30; telephone number as part of the registration at col. 4, lines 50-67); receiving from a second wireless terminal equipment an authentication request containing second terminal identification information for the second wireless terminal equipment (Ibid, but particularly col. 11, lines 15-40); retrieving personal information of the first wireless terminal equipment and updating the retrieved personal information by changing terminal information in the retrieved personal identification into the received terminal identification information (changing the active public-ID from the first to the second device: col. 11, lines 50-65); transferring the subscribed telephone number in the retrieved personal information and the changed terminal subscriber identification information in the updated personal information to the exchange and requesting position information registration which enables call in and call out as a terminal equipment having the subscribed terminal number (col. 11, line 65 – col. 12, line 5).

Sanchez-Herrero does not disclose the use of biometric ["biological"] information as part of the process to register terminal equipment. However, Chander discloses an analogous method to register a phone to a user that links one's biometric information such as a fingerprint, to other information such as the telephone number etc. as part of a two-factor authentication scheme (col. 10, line 50 – at least col. 11, line 60). It would have been obvious to incorporate biometric information as part of the cellphone registration process disclosed by Sanchez-Herrero, as two-factor authentication was a

known improvement that was clearly within the capabilities of one of ordinary skill in the art, to achieve the predictable result of more accurately identifying the user of the terminal equipment.

Regarding claims 2, 8, and 12:

Sanchez-Herrero and Chander further disclose notifying a terminal equipment which has been used so far of renouncement of its use when the position information is requested of the exchange which enables call in and call out as a terminal equipment having the subscribed terminal number based on the authentication of biological information from a new terminal equipment by the received authentication request, retrieved personal information, and the transferred subscribed terminal number (Sanchez-Herrero: col. 13, lines 5-35; Chander: *Ibid*).

Regarding claims 3, 9, and 13:

Chander further discloses wherein the biological information received by the received authentication request is biological information read in real time into the terminal equipment (e.g. col. 11, lines 25-40).

Regarding claims 4, 10, and 14:

Sanchez-Herrero further disclose wherein the personal identification management step includes registering charged user identification information of a specific person among group members as common charged user identification of a

plurality of terminal equipments owned by group members such that the specific person is charged (col. 5, lines 20-35).

Regarding claim 5:

It is now taken as Applicant admitted prior art that the wireless terminal equipment of the Sanchez-Herrero reference would likely be a cellular telephone. It is further observed that this is likely true of the Chander reference as well (preferred embodiments being GSM or other cellular terminals: col. 5, lines 50-67).

Regarding claim 6:

Chander further discloses wherein the biological information is a fingerprint, venous vascular network, palm print, palm shape, facial image, ear shape, or iris (e.g. col. 11, lines 25-40).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: the web pages "Security Blankets - One Just Isn't Enough", Slashdot.org reference, and "Biometric Security Offers Futuristic Protection" teach the concept of "two-factor authentication" (in particular, see the foremost at page 2, 2nd last paragraph and page 3, last three paragraphs; and the lattermost, page 2, last two paragraphs). See also U.S. Patents 7,251,731 to Laniece and 6,941,129 to Marce regarding the use of biometrics as part of cell phone authentication schemes.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas Gyorfí whose telephone number is (571)272-3849. The examiner can normally be reached on 8:30am - 5:00pm Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on (571) 272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

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TAG
11/17/09
/Kimyen Vu/
Supervisory Patent Examiner, Art Unit 2435